

**Remarks/Arguments:**

By this Amendment, Applicants have amended claims 1 and 4, and have cancelled claims 3 and 6. Applicants have also added new claims 8-11. According, claims 1-5 and 7-11 are pending.

**Claim Rejections Under Section 112**

Claims 1-7 stand rejected under 35 U.S.C. § 112 as being indefinite for reasons set forth in numbered paragraph 3 of the Office Action. The basis of the Section 112 rejection is directed to claims 1 and 3. Applicants have amended claim 1 to overcome the basis of the Section 112 rejection. Claim 3 has been cancelled.

Applicants respectfully submit that based on the foregoing Amendment, all pending claims are in full compliance with Section 112.

**Claim Rejections Under § 102**

Claims 1-7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Satou. By this Amendment, Applicants respectfully traverse the Section 102(b) rejection.

Claim 1 is an independent claim to which claims 2 and 7 depend. Claim 4 is an independent claim to which claim 5 depends.

Turning first to independent claim 1, it is directed to a component mounting system, configured by connecting a plurality of devices, for manufacturing a mounted board by placing and soldering a component onto the board. The component mounting system of claim 1 includes the following elements:

- a printer for printing solder onto an electrode formed on the board;
- a first inspection unit for detecting a position of the printed solder and outputting a solder position detection result;
- a component mounting unit for picking up the component , and placing the component on the board;

- a second inspection unit for detecting a position of the component placed and outputting a component position detection result;
- a soldering unit for soldering the component onto the board by heating and melting the solder;
- **a main controller** for updating at least one of a control parameter for controlling an operation of the printer and a control parameter for controlling an operation of the component mounting unit based on at least one of the solder position detection result and the component position detection result, **the updating of the main controller based on feedback processing and feed forward processing of at least one of the solder position detection result and the component position detection result;** and
- a board inspection unit for inspecting the electrode and evaluating positional deviation of the electrode, the board inspection unit inspecting the electrode before printing of solder by the printer.

The component mounting system of claim 1 is patentably distinguished from the Satou Patent at least based on the main controller being updated based on feedback processing and feed forward processing of at least one of the solder position detection result and the component detection result (hereinafter generally referred to as the "Main Controller Feature" of Applicants' claimed invention. Simply put, the Main Controller Feature is neither taught nor suggested in the Satou Patent.

The amendment to claim 1 of the Main Controller Feature is not the addition of new matter but is based on the disclosure throughout the originally filed specification. In this connection, Applicants' identify, for example, the disclosure of the originally filed specification at page 11, line 3 to line 21 with respect to Figure 6. This portion of the specification explains that feedback processing is used for correcting and updating control parameters in upstream devices, and that feed

forward processing is used for correcting and updating control parameters in downstream devices based on data processed in the inspection units. This Main Controller Feature of Applicants' claimed invention and the accompanying advantage are neither taught, suggested, or appreciated in the Satou Patent.

The Satou Patent, in general, relates to an assembly line which includes a printing device for printing solder on a land of a circuit board, a mounting device for mounting an electric component at a predetermined position of the solder, and a solder device for soldering the land to a terminal of the component. A monitored items detecting device detects monitored items of the board and equipment used in the printing, mounting or soldering devices. A control device analyzes a condition of the equipment and quality of the board with reference to warning criterion.

While the operation system of Satou, as shown in Figure 1A, includes a control means 28, analyzing unit 27, and monitoring means 50, there is simply no teaching among these elements, or for that matter any other elements of the Satou system, of a main controller which updates at least one of a control parameter based on feedback processing and feed forward processing of at least one of the solder position detection result and the component position detection result, as set forth in Applicants' claim 1, to which claims 2 and 7 depend. In other words, lacking the Main Controller Feature of Applicants' claimed invention the Satou Patent can neither anticipate nor render obvious the component mounting system defined by Applicants' claims 1, 2 and 7. Applicants therefore request that the Section 102(b) direction directed to these claims be withdrawn.

Independent claim 4 is directed to a component mounting method and includes among its features the following:

- at least one of a control parameter for controlling an operation of the printer and a control parameter for controlling an operation of the component mounting unit is updated based on at least one of the solder position detection result and the component position detection result while executing the steps, and **the updating is based on feedback processing and feed forward processing of at least one of the solder**

**position detection result and the component position  
detection result.**

The feature of claim 4 that the updating is based on feedback processing and feed forward processing of at least one of the solder position detection result and the component position detection result is a feature similar to the Main Controller Feature of Applicants' claim 1. And for the same reasons as noted above with respect to claim 1, Applicants contend that claim 4 and dependent claim 5 are patentably distinguished from the Satou Patent. Applicants therefore request that the Section 102(b) rejection directed to claims 4 and 5 be withdrawn.

Based on the foregoing remarks and amendments, Applicants respectfully submit that claims 1, 2, 4, 5, and 7 are in condition for allowance.

**Newly Added Claims**

By this Amendment, Applicants have added new dependent claims 8-11. Claims 8 and 10 are dependent on claim 1, and claims 9 and 11 are dependent on claim 4. Applicants respectfully submit that new claims 8-11 are not the addition of new matter, but are based on the application as originally filed.

Claims 8 and 9 require that the updating is based on feedback processing and feed forward processing of both the solder position detection result and the component position detection result. This feature is not taught or suggested in the Satou Patent. Thus, dependent claims 8 and 9 are further patentably distinguished from the Satou Patent based on this feature.

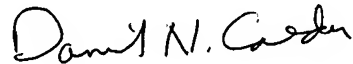
Claim 10 includes the feature that there is feed forward processing between the board inspection unit and the printer, and claim 11 includes the feature that there is feed forward processing between the inspecting step and the printing step. It is Applicants' contention that these features are neither taught nor suggested in the Satou Patent. Based on these features, claims 10 and 11 are further patentably distinguished from the Satou Patent.

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Based on the foregoing remarks and amendments, Applicants respectfully submit that claims 1, 2, 4, 5 and 7-11 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Respectfully submitted,



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